



6T8-A

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## TRIPLE DIODE—HIGH-MU TRIODE

9-PIN MINIATURE TYPE

With heater having controlled warm-up time

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathodes:

Voltage . . . . . 6.3 . . . . . ac or dc volts  
 Current . . . . .  $0.45 \pm 6\%$  . . . . . amp  
 Warm-up time (Average). 11 . . . . . sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield*	
<b>Triode Unit:</b>			
Grid to plate . . . . .	1.7	1.7	$\mu\text{f}$
Grid to cathode & internal shield (pin 7), and heater. . . . .	1.6	1.7	$\mu\text{f}$
Plate to cathode & internal shield (pin 7), and heater. . . . .	1.2	2.4	$\mu\text{f}$
<b>Diode Units:</b>			
Diode-No.1 plate to cathode & internal shield (pin 7), and heater. . . . .	3.8	3.8	$\mu\text{f}$
Diode-No.2 plate to cathode & internal shield (pin 3), and heater. . . . .	3.8	3.8 <sup>•</sup>	$\mu\text{f}$
Diode-No.3 plate to cathode & internal shield (pin 7), and heater. . . . .	3.4	3.6	$\mu\text{f}$
Diode-No.2 cathode & internal shield (pin 3) to all other electrodes, and heater. . . . .	7.5	8.5 <sup>■</sup>	$\mu\text{f}$
Triode grid to any diode plate . . . . .	0.034 max.	0.034 max.	$\mu\text{f}$

Characteristics, Class A<sub>1</sub> Amplifier (Triode Unit):

Plate Voltage . . . . .	100	250	volts
Grid Voltage. . . . .	-1	-3	volts
Amplification Factor. . . . .	70	70	
Plate Resistance (Approx.). . . . .	54000	58000	ohms
Transconductance. . . . .	1300	1200	$\mu\text{mhos}$
Plate Current . . . . .	0.8	1	ma

## Mechanical:

Operating Position. . . . . Any  
 Maximum Overall Length. . . . . 2-3/16"

\*, •, ■: See next page.

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Maximum Seated Length . . . . . 1-15/16"  
 Length, Base Seat to Bulb Top (Excluding tip) . 1-9/16"  $\pm$  3/32"  
 Diameter . . . . . 0.750" to 0.875"  
 Dimensional Outline . . . . . See General Section  
 Bulb . . . . . T6-1/2  
 Base . . . . . Small-Button Noval 9-Pin (JEDEC No. E9-1)  
 Basing Designation for BOTTOM VIEW . . . . . 9E

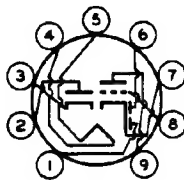
Pin 1—Diode-No.3  
 Plate

Pin 2—Diode-No.2  
 Plate

Pin 3—Diode-No.2  
 Cathode,  
 Internal  
 Shield

Pin 4—Heater

Pin 5—Heater



Pin 6—Diode-No.1  
 Plate

Pin 7—Cathode of  
 Triode &  
 Diodes No.1  
 & No.3,  
 Internal  
 Shield

Pin 8—Triode Grid

Pin 9—Triode Plate

## TRIODE UNIT — AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values.

PLATE VOLTAGE . . . . . 330 max. volts

### GRID VOLTAGE:

Positive-bias value . . . . . 0 max. volts

PLATE DISSIPATION . . . . . 1.1 max. watts

### PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . 100 max. volts

Heater positive with respect to cathode . 100 max. volts

### Typical Operation as Resistance-Coupled Amplifier:

See RESISTANCE-COUPLED AMPLIFIER CHART No. 7  
 at front of this Section

## DIODE UNITS — Three

### Maximum Ratings, Design-Maximum Values:

PLATE CURRENT (For each diode) . . . . . 5.5 max. ma

### PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . 100 max. volts

Heater positive with respect to cathode . 100 max. volts

### Characteristics (Each Unit):

Plate Voltage . . . . . 5 volts

Plate Current . . . . . 20 ma

### Diode Considerations:

Diode No.1, diode No.3, and the triode have a common cathode, and diode No.2 has a separate cathode. Diode No.2 (pins 2 & 3) and diode No.3 (pins 1 & 7) are recommended for use in FM detector applications, while diode No.1 (pins 6 & 7) is recommended for use as an AM detector.



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## TRIPLE DIODE—HIGH-MU TRIODE

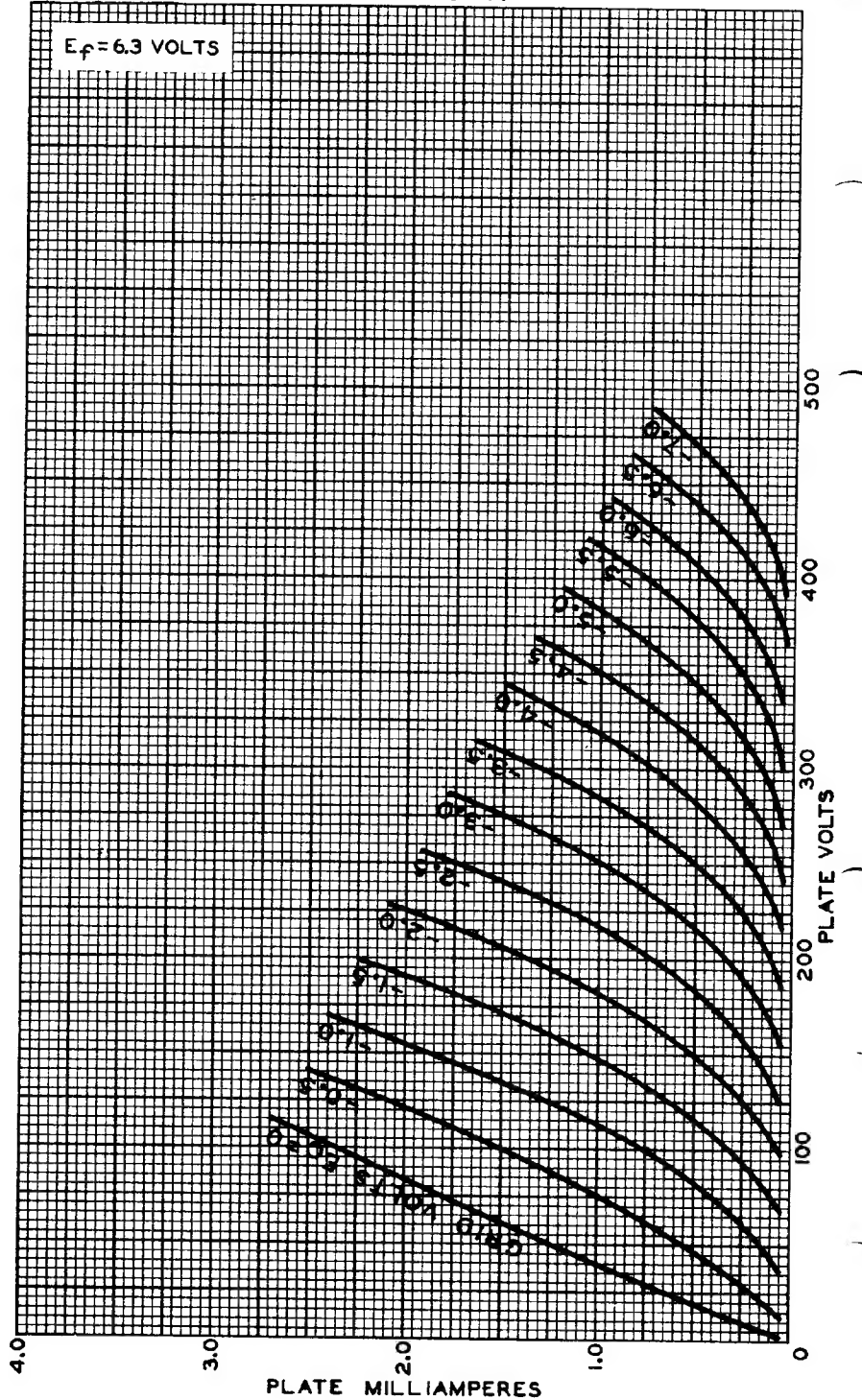
- \* With external shield JEDEC No.315 connected to pin 7 except as noted.
- With external shield JEDEC No.315 connected to pin 3.
- With external shield JEDEC No.315 connected to pins 4 and 5.

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# AVERAGE PLATE CHARACTERISTICS TRIODE UNIT



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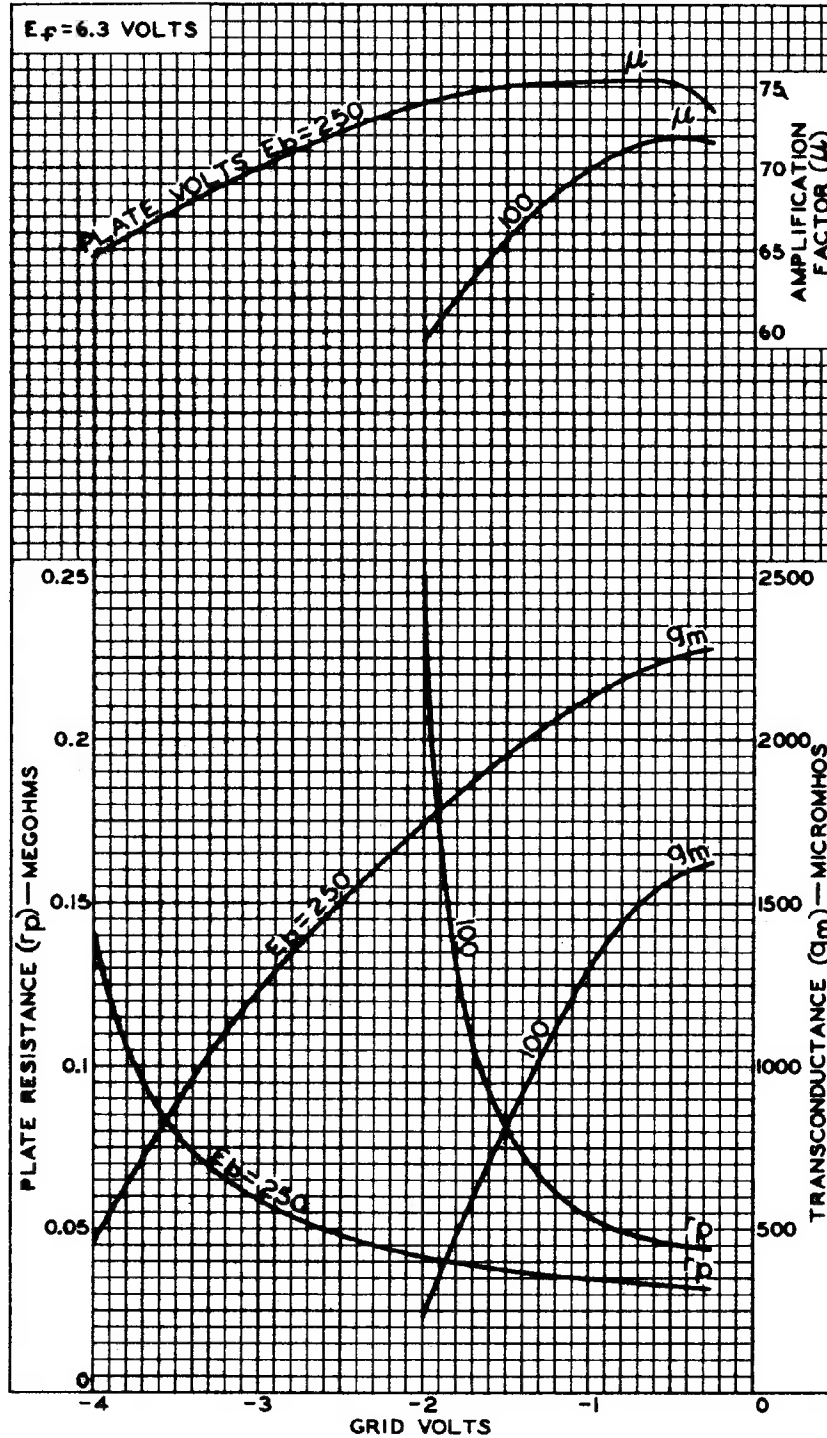
92CM-7063



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AVERAGE CHARACTERISTICS  
TRIODE UNIT

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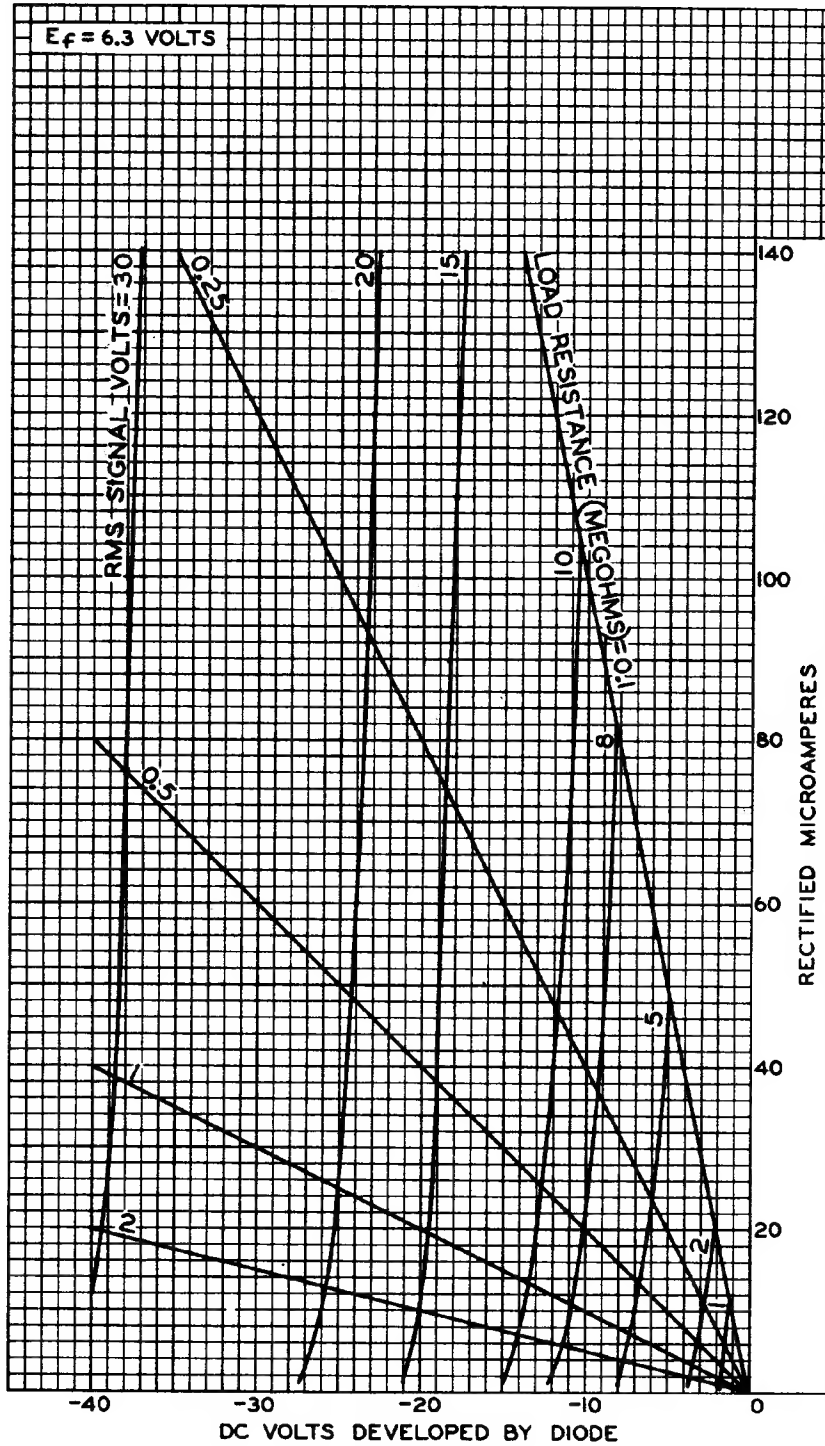


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AVERAGE CHARACTERISTICS  
HALF-WAVE CIRCUIT—EACH DIODE UNIT



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92CM-9610